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BLADE AND HANDLE COMBINATION

Filed Feb. 14, 1950

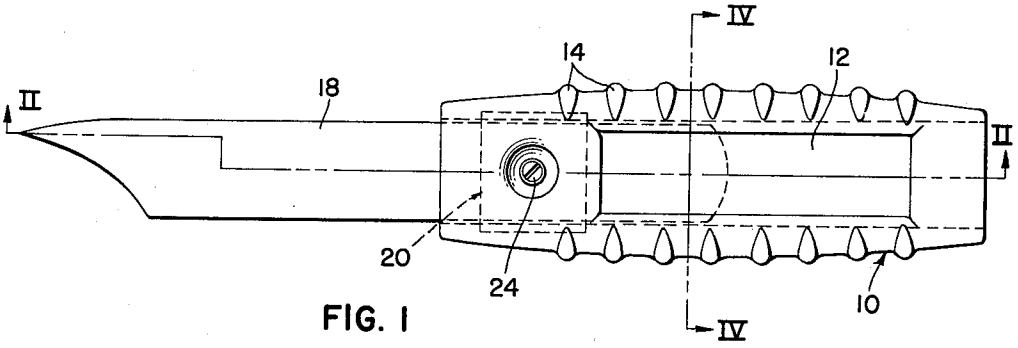

FIG. 1

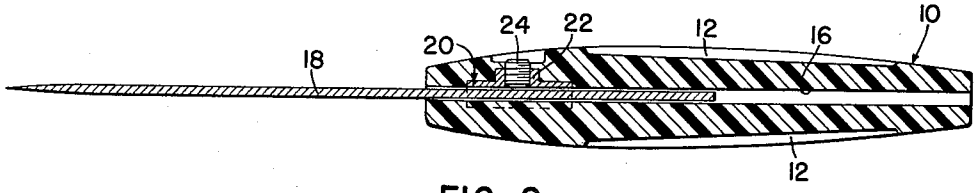

FIG. 2

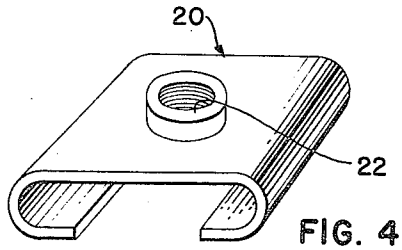

FIG. 4

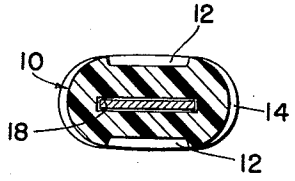

FIG. 3

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BLADE AND HANDLE COMBINATION

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4 Claims. (Cl. 30—320)

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This invention relates to knives or the like, and, more particularly, is concerned with improved combinations of handles and removable blades or tools adjustably or alternately received in the handle.

It has been proposed heretofore to provide handle and blade combinations in which the handle is adapted to adjustably and removably receive a knife blade or other tool so that the knife blade as it wears down due to sharpening can be adjusted outwardly of the handle, or new or different blades can be utilized with the same handle. However, I have found that such known combinations are open to the objection that they are overly expensive to manufacture, may not hold up in use, are difficult to operate in adjusting the position of the blade or in changing from one blade to another, and are sometimes not comfortable in the palm or hand when used. One typical known structure includes a metal handle which is usually machined to shape and with bone or wooden sides or inserts being embedded in or joined to the metal handle. Constructions of this type are relatively expensive if properly made, and are subject to breakage or separation when dropped.

It is the general object of my invention to avoid and overcome the foregoing and other difficulties of and objections to known blade and handle combinations by the provision of a new and improved combination of this type characterized by inexpensiveness, durability, comfort in use, and ease of blade adjustment or change.

Another object of my invention is to provide a full-molded, thermosetting plastic handle having a metal clamp molded therein which is adapted to positively lock a blade in adjusted position in the handle or to allow quick substitution of new or other blades in the handle.

Another object of my invention is to provide a blade and handle combination wherein the handle is metal reinforced plastic characterized by neatness of appearance, lightness in weight, ease of blade adjustment, and by long life.

The foregoing objects of my invention, and other objects which will become apparent as the description proceeds, are achieved by the provision in combination of a blade, a plastic handle having a bore slidably receiving the blade, a metal clamp molded into the handle and having portions surrounding the blade, and a set screw tapped into the clamp and adapted to engage the blade to force it into positively held relation with other portions of the clamp. The handle is preferably smoothly rounded and tapers towards each end, and is formed with a plurality of substantially parallel ribs at opposite sides which are molded integrally with the handle and which taper into the handle.

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For a better understanding of my invention, reference should be had to the accompanying drawings, wherein Fig. 1 is a side elevation of one typical embodiment of the blade and handle combination of my invention, the view being taken towards the flat side of the blade and handle;

Fig. 2 is a longitudinal cross-sectional view taken substantially on line II—II of Fig. 1;

Fig. 3 is a transverse sectional view of the blade and handle taken on line IV—IV of Fig. 1; and

Fig. 4 is an enlarged perspective view of the metal clamp incorporated in the invention.

Having particular reference to the drawings, the numeral 10 indicates generally a molded plastic handle. The plastic may be either of the thermoplastic or of the thermosetting type, preferably the latter, and may, obviously, be made in any desired color to add brilliance and sales appeal to the combination. As illustrated, the handle 10 is made smoothly rounded and tapers towards opposite ends. Flat rectangular depressions 12 may be molded in each side of the handle 10, and preferably a plurality of substantially parallel ribs 14 which taper into the sides of the body are molded on opposed sides of the handle to prevent slippage of the handle in the hand of a user.

The handle 10 is formed with a flat bore 16 which extends in one end of the body and substantially or completely through the body of the handle, the bore 16 being of a size to snugly and slidably receive a blade 18, such as the knife blade illustrated.

Molded into the handle adjacent one end is a clamp, indicated as a whole by the numeral 20, and generally made from sheet metal in the flattened C-shape best evident from Fig. 4 of the drawings. The clamp 20 is molded in the handle 10 so that the inside of the clamp is substantially in alignment with the inside of the bore 16 in the handle whereby the clamp 20 closely surrounds and receives the blade 18 in the manner illustrated in the drawing. A tapped circular boss 22 is formed on one side of the clamp 20, and this is usually achieved by pressing up a circular flange from the sheet metal of the clamp, such a pressed-up circular flange presenting a longer hole to be tapped to thereby provide more threads for supporting a set screw 24 adjustably received in the

circular flange or boss 22. The body of the handle 10 is provided with an opening in alignment with the circular boss 22 so that the set screw 24 can be readily operated by a wrench or screw driver to clamp down against the blade 18 in turn forcing it against the opposed portions of the clamp, or to release the set screw to permit readjustment of the position of the blade 18 or substitution of a new blade or other tool in the handle.

From the foregoing, it will be recognized that the various objects of my invention have been achieved by the provision of a relatively simple, inexpensive, durable, and long-lived handle and blade combination which is attractive in appearance, comfortable in use, and in which blade adjustment or changing is relatively simple. In addition, once the blade is properly positioned in the handle, it is positively held and gripped in the handle until reset.

While in accord with the patent statutes I have specifically illustrated and described one best known embodiment of my invention, it is to be particularly understood that I am not to be limited thereto or thereby, but that the scope of my invention is defined in the appended claims.

I claim:

1. A knife or the like comprising a molded plastic handle having a flat bore extending therethrough from end to end, a blade slidably received in the bore and of dimensions to have a snug sliding fit in the bore, a metal insert of flattened C-shape molded into the plastic, the inside of the insert defining substantially the inside of the bore adjacent one end of the handle, a circular hollow boss formed integral with the insert, the boss being tapped, a set screw carried by the boss, the handle being formed with a hole in alignment with the set screw so that it can be turned into locking engagement with the blade, said handle being smoothly rounded and tapering towards each end, and a plurality of substantially parallel ribs at opposite sides of the handle molded integrally with the handle and tapering into the handle.

2. A knife or the like comprising a molded plastic handle having a flat bore extending therethrough from end to end, a blade slidably received in the bore and of dimensions to have a snug sliding fit in the bore, a metal insert of flattened C-shape molded into the plastic, the inside of the insert defining substantially the inside of the bore adjacent one end of the handle, a circular hollow boss formed integral with the insert, the boss being tapped, a set screw carried by the boss, the handle being formed with a hole in alignment with the set screw so that it can be turned into locking engagement with the blade, said handle being smoothly rounded and tapering towards each end.

3. A knife or the like comprising a unitary molded plastic handle having a flat bore extending into and through the handle from end to end thereof, a blade slidably received in the bore and of dimensions to have a snug sliding fit in the bore, a metal insert of longitudinally uniform flattened C-shape in section molded into the plastic, the inside of the insert being in alignment with and defining a portion of the bore adjacent one end of the handle, the insert having an apertured integral circular boss and being of a size to snugly receive the blade, the boss being tapped and being positioned within the molded handle, and a set screw carried by the boss, the handle being formed with a hole in alignment with the set screw so that it can be turned into locking engagement with the blade to force same into tight engagement with a portion of the insert opposite to the boss.

4. A knife or the like comprising a unitary molded plastic handle having a flat bore extending into one end and at least substantially through the handle, a blade slidably received in the bore and of dimensions to have a snug sliding fit in the bore, a metal insert of flattened C-shape in section molded completely within the plastic, the inside of the insert being in alignment with and defining a portion of the bore, the insert having an apertured circular boss, the boss being tapped and being positioned within the molded handle, and a set screw carried by the boss, the handle being formed with a hole in alignment with the set screw so that it can be turned into locking engagement with the blade.

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